CONTENTS

No. 1 JANUARY, 1936

SIDNEY BLISS. With the technical assistance of Fred Green. Refection in the rat. With an appendix on methods of preparing basic materials for deficient diets. Eight figures 1

R. M. BETHKE, W. E. KRAUSS, P. R. RECORD AND O. H. M. WILDER. The comparative antirachitic efficiency of vitamin D in irradiated milk, metabolized (yeast) milk and cod liver oil 21

ELLA MCCOLLUM VAHLTEICH, MARY SWARTZ ROSE AND GRACE MACLEOD. The effect of digestibility upon the availability of iron in whole wheat. One figure 31

ESTHER H. FUNNELL, ELLA MCC. VAHLTEICH, SADIE O. MORRIS, GRACE MACLEOD AND MARY S. ROSE. Protein utilization as affected by the presence of small amounts of bran or its fiber 37

W. H. RIDDELL, C. H. WHITNAH, J. S. HUGHES AND H. F. LIENHARDT. Influence of the ration on the vitamin C content of milk 47

JEHIEL DAVIDSON AND J. A. LECLERC. The variation in the mineral content of vegetables 55

C. J. KOEHN, JR., AND C. A. ELVEHJEM. Studies on vitamin G(B_2) and its relation to canine black tongue. Two figures 67

IRVINE MCQUARRIE, WILLIS H. THOMPSON AND JOHN A. ANDERSON. Effects of excessive ingestion of sodium and potassium salts on carbohydrate metabolism and blood pressure in diabetic children. Nine figures 77

No. 2 FEBRUARY, 1936

HENRY R. KRAYBILL AND CHARLES L. SHREWSBURY. The relative vitamin A potency of carotene fed in butter fat and cottonseed oil. Two charts 103

J. E. GREAVES AND ARIEL ANDERSEN. Influence of soil and variety on the copper content of grains 111

ARTHUR D. HOLMES, FRANCIS TRIPP AND PERCY A. CAMPBELL. The vitamin A reserve of embryo and baby chicks. Two charts 119

A. R. Patton and L. S. Palmer. The amino acid content of eggs and chicks: relation to diet and to incidence of chondrodystrophy 129

Estelle E. Hawley, D. J. Stephens and George Anderson. The excretion of vitamin C in normal individuals following a comparable quantitative administration in the form of orange juice, cevitamic acid by mouth and cevitamic acid intravenously. Four figures 135

Warren M. Cox, Jr. and Miriam Imboden. The role of calcium and phosphorus in determining reproductive success. Seven text figures and one plate 147

Warren M. Cox, Jr. and Miriam Imboden. The mineral composition of young rats. Five figures 177

No. 3 MARCH, 1936

H. G. Barott, T. C. Byerly and Emma M. Pringle. Energy and gaseous metabolism of normal and deutectomized chicks between 10 hours and 100 hours of age. Seven figures 191

Mary Speirs and H. C. Sherman. Calcium and phosphorus retention in growth, in relation to the form of carbohydrate in the food 211

J. W. Hayward, H. Steenbock and G. Bohstedt. The effect of heat as used in the extraction of soy bean oil upon the nutritive value of the protein of soy bean oil meal 219

Frances Cope Hummel, Helen R. Sternberger, Helen A. Hunscher and Ice G. Macy. Metabolism of women during the reproductive cycle. VII. Utilization of inorganic elements (a continuous case study of a multipara). Three figures 235

H. H. Mitchell, Wise Burroughs and Jessie R. Beadles. The significance and accuracy of biological values of proteins computed from nitrogen metabolism data 257

Alfred T. Shohl. With a note by S. B. Wolbach. Rickets in rats. XV. The effect of low calcium-high phosphorus diets at various levels and ratios upon the production of rickets and tetany. One figure 275

No. 4 APRIL, 1936

James H. Jones and Bernard N. E. Cohn. The healing of rickets in rats on a diet containing negligible amounts of calcium and vitamin D. One plate (ten figures) 293

Helen L. Gillum and Ruth Okey. The effect of quantitative underfeeding and of vitamin A deficiency on the tissue lipids of rats fed diets low in cholesterol 303

HELEN L. GILLUM AND RUTH OKEY. The effect of quantitative underfeeding and of vitamin A deficiency on the liver lipids of rats fed diets with added cholesterol. Three figures 309

ELIZABETH J. MCKITTRICK. Basal metabolism of Wyoming University women 319

AMY L. DANIELS AND GLADYS J. EVERSON. With the cooperation of Mary F. Deardorff, Elizabeth M. Knott, Florence L. Scoular and Olive E. Wright. A study of the magnesium needs of preschool children. Two figures 327

ROE E. REMINGTON AND HAROLD LEVINE. Studies on the relation of diet to goiter. III. Further observations on a goitrogenic diet. One figure 343

JOSEPH H. ROE AND GLENN L. BARNUM. The anti-scorbutic potency of reversibly oxidized ascorbic acid and the observation of an enzyme in blood which reduces the reversibly oxidized vitamin. One figure 359

C. W. DUNCAN AND E. J. MILLER. Results of feeding various levels of soil containing beryllium to chickens, dogs and rats 371

N. B. GUERRANT, R. ADAMS DUTCHER, FLORENCE S. TABOR AND RUSSEL RASMUSSEN. The vitamin content of canned pineapple juice 383

No. 5 MAY, 1936

R. C. BENDER, S. ANSBACHER, G. E. FLANIGAN AND G. C. SUPPLEE. The influence of dextrin and sucrose on growth and dermatitis. Five figures 391

S. ANSBACHER, G. C. SUPPLEE AND R. C. BENDER. Lactoflavin, a necessary growth-promoting dietary factor. Three figures 401

H. M. ZIMMERMAN AND GEORGE R. COWGILL. Lesions of the nervous system in vitamin deficiency. IV. The effect of carotene in the treatment of the nervous disorder in rats fed a diet low in vitamin A. Two figures 411

RUSSEL RASMUSSEN, N. B. GUERRANT, A. O. SHAW, R. C. WELCH AND S. I. BECHDEL. The effects of breed, characteristics and stages of lactation on the vitamin C (ascorbic acid) content of cow's milk. One figure 425

RAY D. WILLIAMS AND WILLIAM H. OLMSTED. The effect of cellulose, hemicellulose and lignin on the weight of the stool: A contribution to the study of laxation in man. Two figures 433

WILLIAM JOHN DANN. The vitamin G complex. I. The non-identity of rat dermatitis due to vitamin B_6 deficiency and the dermatitis of human pellagra 451

RUTH OKEY AND EDITH YOKELA. The effect of feeding egg yolk on the liver lipids of young rats 463

LOUIS L. MADSEN. The comparative effects of cod liver oil, cod liver oil concentrate, lard and cottonseed oil in a synthetic diet on the development of nutritional muscular dystrophy. Two plates (eight figures) 471

No. 6 JUNE, 1936

S. IDELL PYLE AND C. ELTON HUFF. With the assistance of Raymond Davis. The use of 3-day periods in human metabolism studies. Calcium and phosphorus. Two figures 495

R. E. LOTHROP. The potential alkalinity of honey: Its acid-base value as a food 511

O. L. KLINE, H. R. BIRD, C. A. ELVEHJEM AND E. B. HART. An improved synthetic ration for vitamin B_1 studies. One figure 515

S. ANSBACHER, G. C. SUPPLEE AND R. C. BENDER. Pellagra-like syndrome in chicks. One figure 529

H. ERNEST BECHTEL AND C. A. HOPPERT. A study of the seasonal variation of vitamin D in normal cow's milk. Three figures 537

B. W. FAIRBANKS AND H. H. MITCHELL. The relation between calcium retention and the store of calcium in the body, with particular reference to the determination of calcium requirements. One figure 551

SERGIUS MORGULIS AND HOWARD C. SPENCER. A study of the dietary factors concerned in nutritional muscular dystrophy 573

T. C. SHELLWOOD, M. A. BREND AND E. A. ROPER. Changes in the vaginal epithelium of the rat on an excessive vitamin A diet 593

IVA SELLEG AND C. G. KING. The vitamin C content of human milk and its variation with diet 599

WILLIAM C. ROSE. Lafayette Benedict Mendel—An appreciation 607

AMERICAN INSTITUTE OF NUTRITION. Proceedings of the third annual meeting ..... Sup. 1

ERRATA

Volume 10, page 40. The second paragraph of the notes explanatory to table 1 should read as follows:

Column W_1 = Weight at weaning (28 days old). Column W_2 = Weight at start of test (43 to 48 days old). Column W_3 = Weight at end of test (88 to 93 days old). Column E = Time in days between end of test and onset of paralysis or death.